

WO 2005/022433 PCT/JP2004/012672

FIG. 2

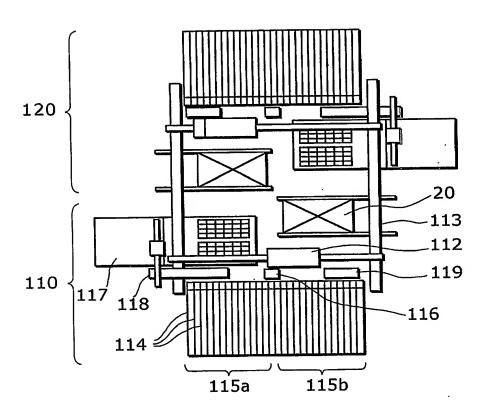
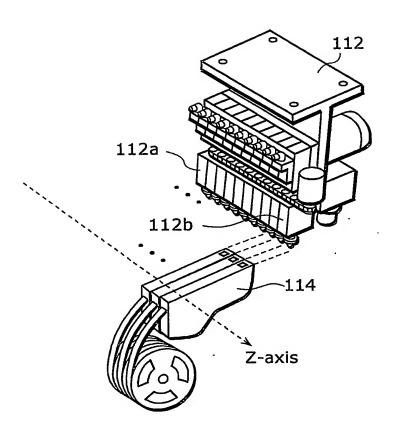


FIG. 3



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FIG. 4A

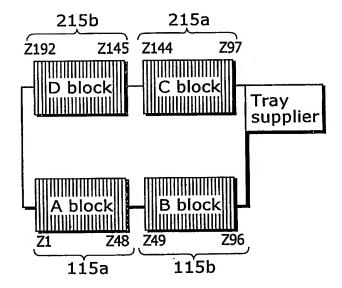


FIG. 4B

													_	
			No. of 249 251 293 295 tapes 297 299 2141 2143 tapes 2145 2147 2189 2191 tapes positions positions	1	1	1	2	2	2	3	4	4		
			No. of Z positions	192	96	96	48	48	48	32	24	24		
	7192		No. of tapes	48	24	24	12	12	12	æ	9	9		
	71		7191	0	0	0	0	0	0	ı	ı	ı		
Ω	L.		Z189	0	0	0	0	0	0	0	0	0		\prod
	7145		747	0	0	0	0	0	0	0	0	0		
			2145	0	0	0	0	0	0	ī	i	ī		
	7144		No. of	84	24	24	12	12	12	8	9	9		
	5	7	743	0	0	0	0	C	0	1	ī	ī		\prod
U			7141	0	0	0	0	c	0	0	0	0		1
	707	7	662	0	0	0	O	C	0	0	0	0		1
L			Z97	0	0	0	C	C	0		1	1		1
	90	067	No. of tapes	48	24	24	12	12	12	œ	عاد	عاد		
<u>س</u>			562	0	0	C					1	1	\downarrow	
		2	657	C	0	C	C	C						
	Z49	Ž	49 73	C	0	C							4	
	9	24 8 8	lo. of z	. 84	1	7	T	\top	1	\top	十	1	9	
			147 157	10				d	10		+	+	1	
	1	Z1	Z45/Z	c	o	do	10							
	'	4	Z1 Z3 Z45 Z47	2	C					2 0			$\overline{2}$	
\vdash	+			10				1	١.		1	+'	\dashv	
			Tape	ď	S(Sinnle)	15.	77	2 2	2 6	25	F	3 5	7,	
			Component											

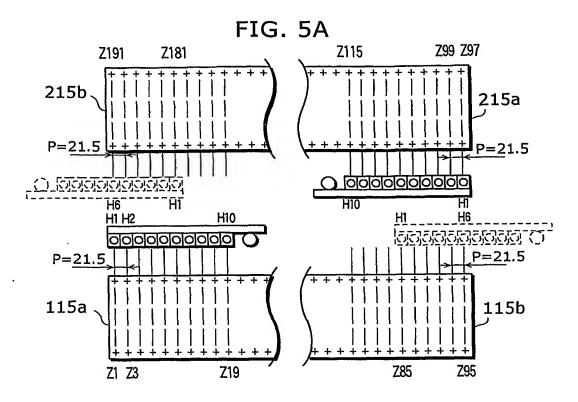


FIG. 5B

10 nozzle	Inner side	Z1 Z2	Z3 Z4	Z5 Z6	Z7 Z8	Z9 Z10	Z11 Z12	Z13 Z14	Z15 Z16	Z17 Z18	Z19 ~ Z86	Z87 Z88	Z89 Z90	Z91 Z92	Z93 Z94	Z95 Z96
heads	Outer side	Z97 Z98	Z99 Z100	Z101 Z102	Z103 Z104	Z105 Z106	Z107 Z108	Z109 Z110	Z111 Z112	Z113 Z114	Z115 ~ Z182	Z183 Z184	Z185 Z186	Z187 Z188	Z189 Z190	Z191 Z192
	H1	0	0	0	0	0	0	0	0	0	0	_	-	_	_	
	H2		0	0	0	0	0	0.	0	0	0	0		_		-
	НЗ	_	_	0	0	0	0	0	0	0	0	0	0	-		_
	H4	-	-	_	0	0	0	0	0	0	0	0	0	0	_	—
Heads	H5	_	_	_	-	0	0	0	0	0	0	0	0	0	0	
(Nozzles)	H6	_	-	_	_	-	0	0	0	0	0	0	0	0	0	0
	H7			_	-	_	_	0	0	0	0	0	0	0	0	0
	H8	_	-	_	-	-	-	_	0	0	0	0	0	0	0	0
ĺ	H9	_	=	_	_	_	_		_	0	0	0	0	0	0	0
	H10	_	-	_	_	_	-		-		0	0	0	0	0	0

 \bigcirc : Picking up possible

-: Picking up impossible

FIG. 6A FIG. 6B FIG. 6C FIG. 6D

423a 423b 423c 423d

FIG. 7

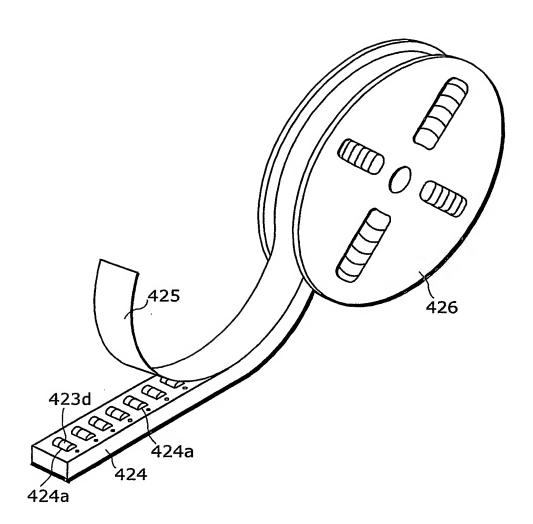
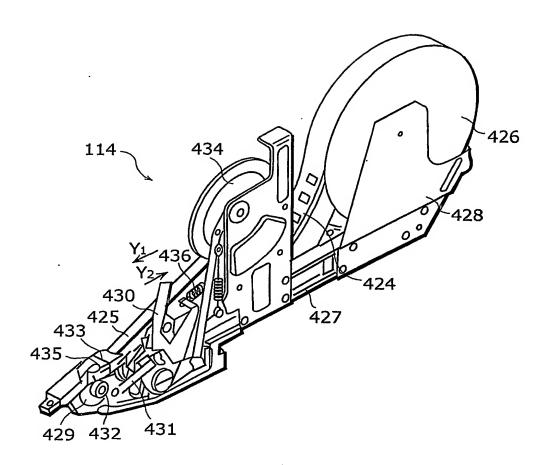
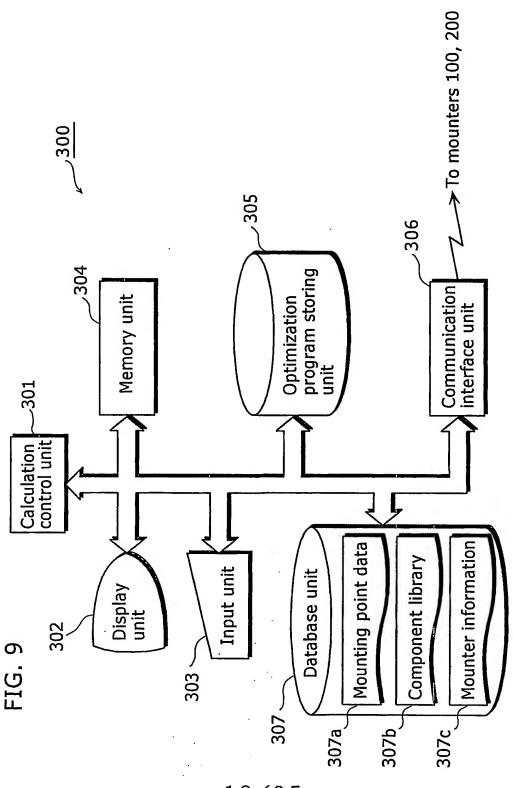


FIG. 8





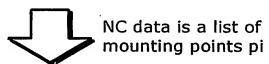
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FIG. 10

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Mounting points pi=(Component type Ci, X coordinate Xi, Y coordinate Yi, Mounting angle θ i, Control data ϕ i)



NC data =
$$\begin{pmatrix} p1 \\ p2 \\ p3 \\ \vdots \\ \vdots \\ pN \end{pmatrix} = \begin{pmatrix} c1, x1, y1, \theta1, \phi1 \\ c2, x2, y2, \theta2, \phi2 \\ c3, x3, y3, \theta3, \phi3 \\ \vdots \\ cN, xN, yN, \thetaN, \phiN \end{pmatrix}$$

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FIG. 11

						307b			
Component	(Appea-	siz	mpo ze (m	nent m)	2-D recognition	Pick-up nozzle	Tact time	Speed XY	
name	rance)	X	Υ	L	method	1102216	(sec.)		
0603CR		0.6	0.3	0.25		SX	0.086		
1005CR		1.0	0.5	0.3-0.5		SA	0.000		
1608CR	*	1.6	0.8	0.4-0.8			0.094]	
2012CR		2.0	1.25	0.4-0.8		S]	
3216CR		3.2	1.6	0.4-0.8		5		1	
4TR		2.8	2.8	1.1					
6TR	€	4.3	4.5	1.5					
1TIP		0.000 0.000 0.000 0.000	1	}	Cylindrical tip	·			
2TIP	O)	3.6	Φ1.4	-		цр	0.11		
1CAP		3.8	1.9	1.6		S	ł		
2CAP		4.7	2.6	2.1		3			
3CAP		6.0	3.2	2.5					
4CAP		7.3	4.3	2.8	Reflection	М			
SCAP		4.3	4.3	6.0		1-1			
LCAP		6.6	6.6	6.0			\ ·		
LLCAP	1	10.3	10.3	10.5		ML]		
1VOL	4	4.5	3.8	1.6-2.4					
2VOL		3.7	3.0	1.6		M	0.13	2	
3VOL		4.8	4.0	3.0					
		-							

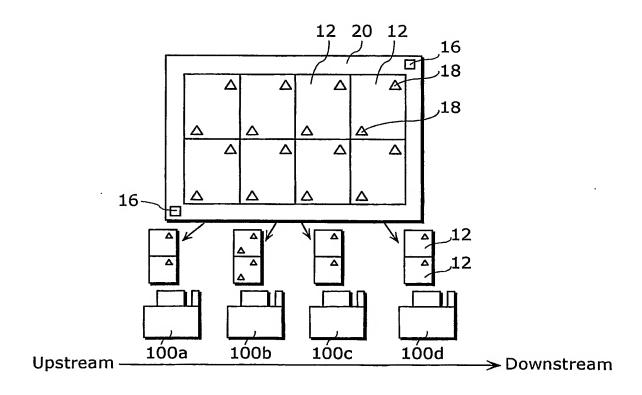
PCT/JP2004/012672

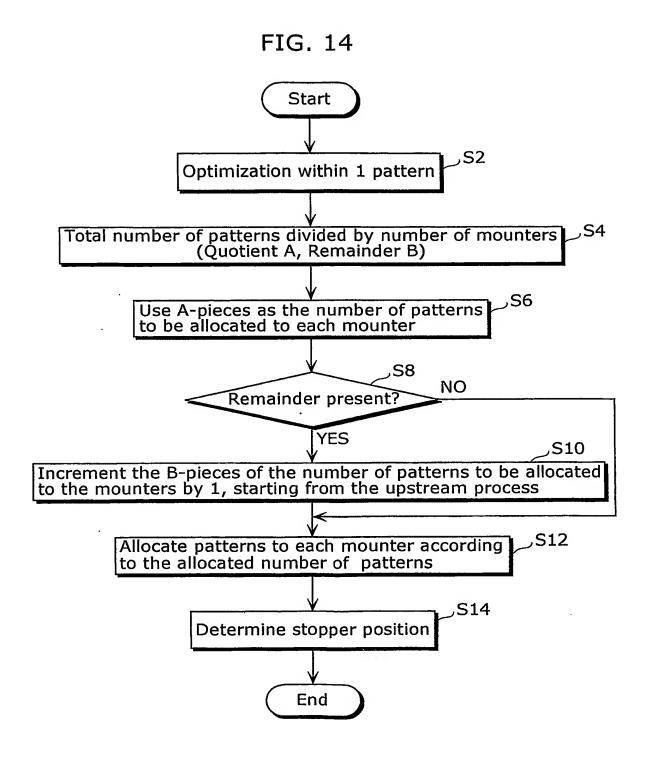
FIG. 12

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Unit ID	Head information	Nozzle information	Cassette information	Tray information
110	10 nozzle heads	SX,SA,···	96	8 levels
120	10 nozzle heads	None	96	None
210	4 nozzle heads	S,M,	48	None

FIG. 13





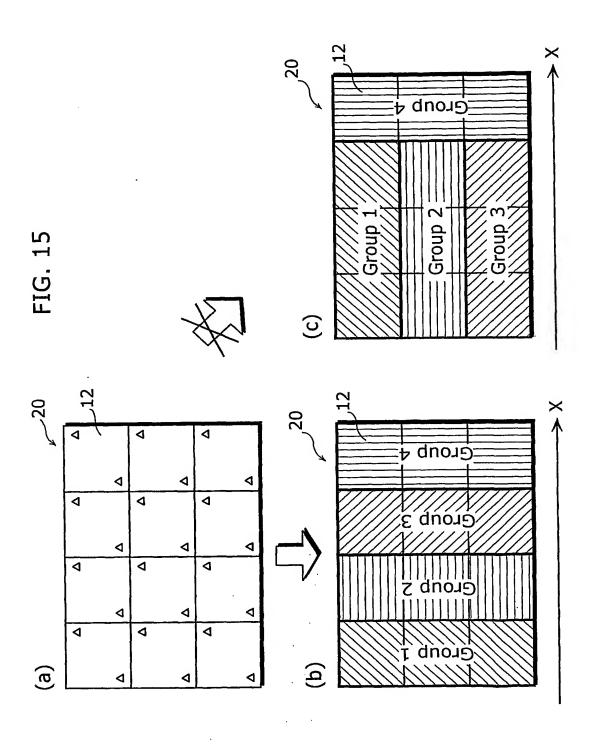
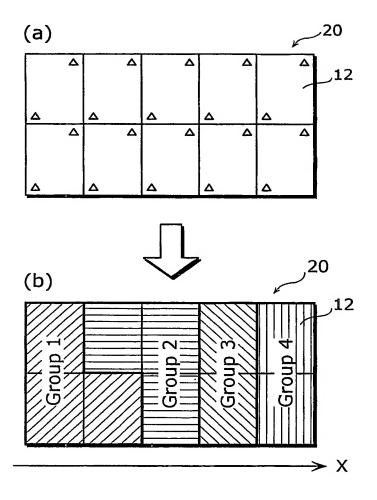
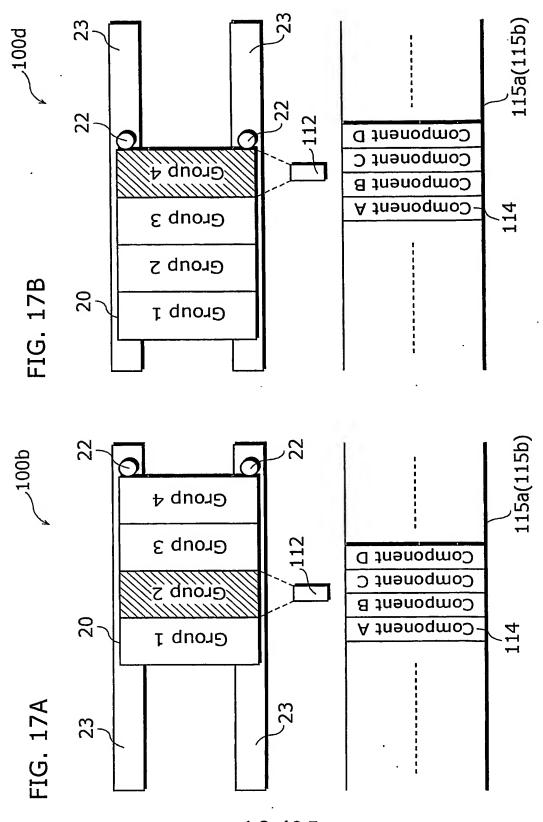
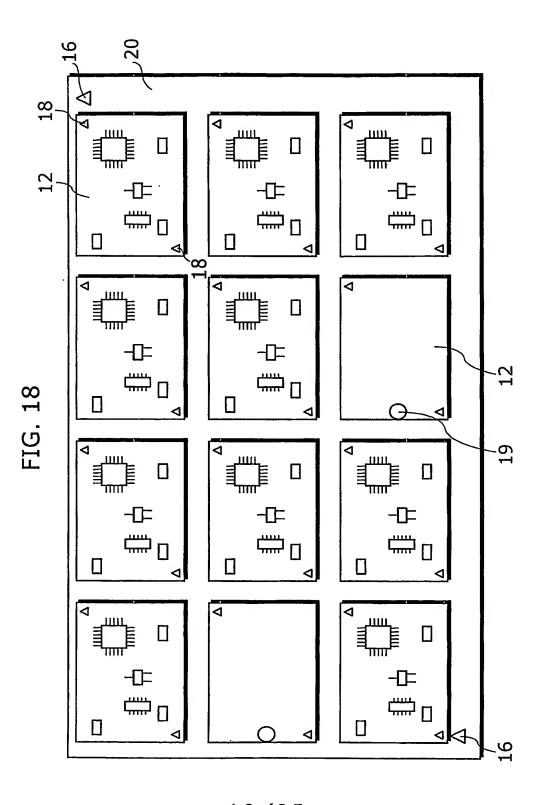


FIG. 16





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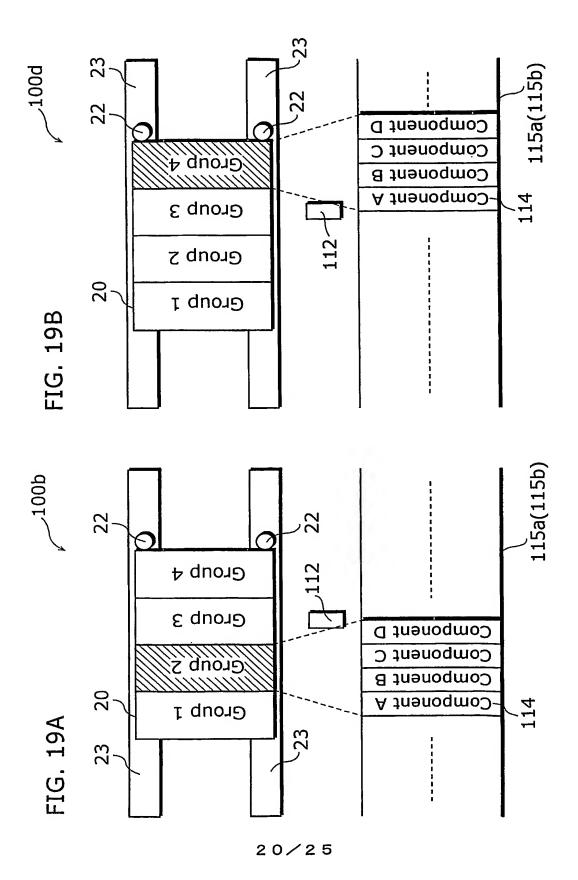


FIG. 20

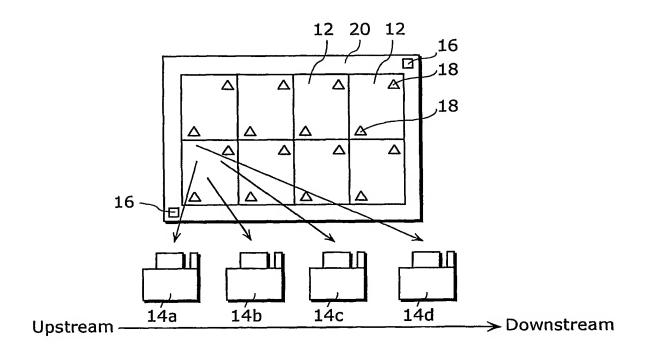
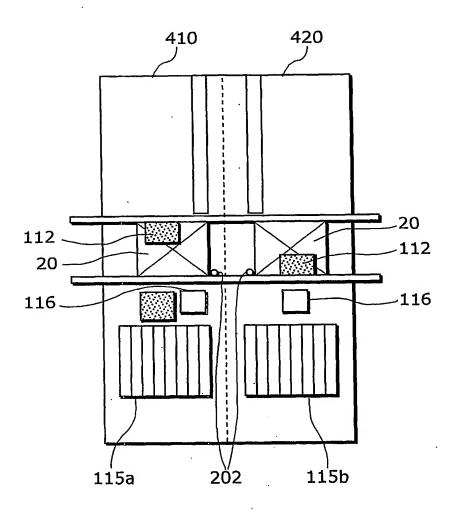


FIG. 21



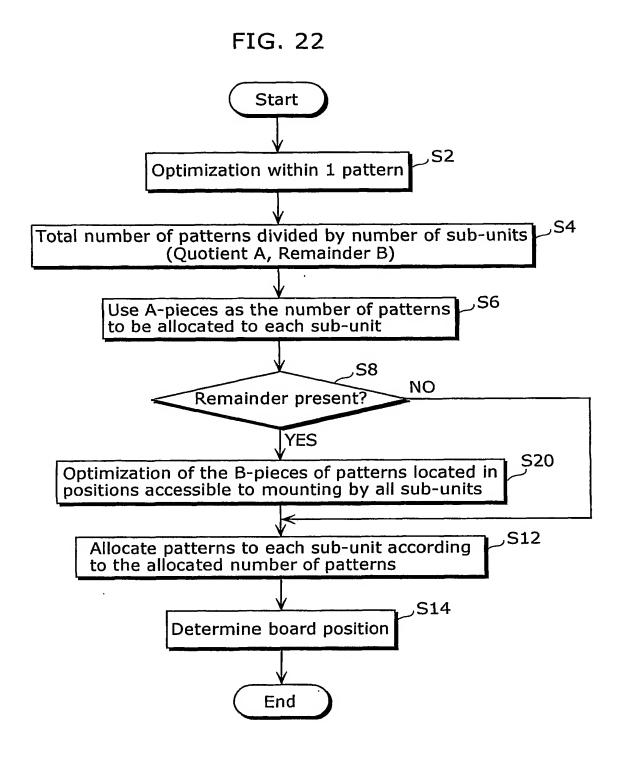
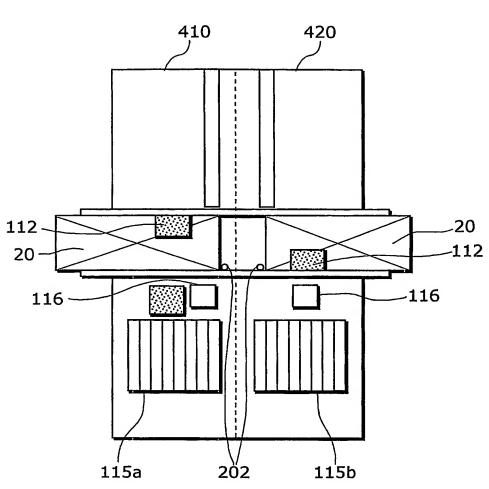
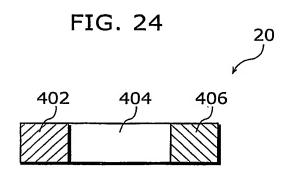


FIG. 23





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FIG. 25

